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Date: February 20, 2009 /Robin Wardzala/
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:			
Applicant(s):	Andrew C. Glass	Examiner:	Nicholas Augustine
Serial No:	10/650,622	Art Unit:	2179
Filing Date:	August 28, 2003		

Title: MULTI-DIMENSIONAL GRAPHICAL DISPLAY OF DISCOVERED WIRELESS DEVICES

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

APPEAL BRIEF

Dear Sir:

Appellant's representative submits this brief in connection with an appeal of the above-identified patent application. The commissioner is authorized to charge the requisite $540 fee, to the credit card designated on the enclosed credit card payment form. In the event any additional fees are due in connection with this submission, the Commissioner is authorized to charge such fees to Deposit Account No. 50-1063 [MSFTP429US].

I. Real Party in Interest (37 C.F.R. §41.37(c)(1)(i))

The real party in interest in the present appeal is Microsoft Corporation, the assignee of the present application.

II. Related Appeals and Interferences (37 C.F.R. §41.37(c)(1)(ii))

Appellant, appellant's legal representative, and/or the assignee of the present application are not aware of any appeals or interferences which may be related to, will directly affect, or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. Status of Claims (37 C.F.R. §41.37(c)(1)(iii))

Claims 1-16, 18-45 and 47-66 have been rejected by the Examiner. The rejections of claims 1-16, 18-45 and 47-66 are being appealed.

IV. Status of Amendments (37 C.F.R. §41.37(c)(1)(iv))

No claim amendments have been entered after the Final Office Action.

V. Summary of Claimed Subject Matter (37 C.F.R. §41.37(c)(1)(v))

A. Independent Claim 1

The subject invention as recited in independent claim 1 relates to a system for discovery and multi dimensional display of devices identified on a network, and anticipating availability of such devices. (*See* page 1 line 30, *see* page 6 line 7; *see* page 8, lines 29-31; *see* page 13 line 31, *see* page 14 lines 22-24). A detection component can detect location for wireless devices on a network relative to a first device, and a display component renders multi-dimensional representation of respective locations of the devices on a first wireless device. (*See* page 4 lines 11-13). Such detection component automatically extends a sensing range to detect one of a predetermined type of devices. (*See* page 6 lines 27 to page 7 line 2.)

Behavior of users in employing such devices can be learned by a classifier to further anticipate availability of the one or more other wireless device. (*See* page 8 line 27 to page 9 line 4; *see* also page 9 lines 21-28). Put differently, such classifier can infer and/or anticipate availability of detected wireless devices, based on usage trends/user behavior. For example, a

support vector machine (SVM) classifier can be employed that operates by finding a dynamically changing hypersurface in the space of possible inputs; and/or defining the time at which a given device/port will become available. (*See* page 9 lines 29 to page 10 line 16). Moreover, various inferences can be employed to identify a specific context or action (*e.g.*, availability of a wireless device based on user behavior), or can generate a probability distribution over states, for example). The inference can be probabilistic (*e.g.*, computation of a probability distribution over states of interest based on a consideration of data and events), to identify user behavior and/or usage trends. (*See* page 9 lines 22 to page 10 line 16).

B. Independent Claim 31

Independent claim 31 is directed to a system for discovery and presentation of devices on a wireless network, wherein a filter component can filter location data based on predetermined location criteria. (*See* page 2 lines 1-5, *see* page 6 line 22-25, *see* page 14 lines 22-24, *see* page 31 lines 1-3). For example, such filtering can be selected in a directional format such that a subset of devices in a hemisphere, quadrant, or other volume of space can be detected. (*See* page 6 lines 22-26). Subsequently, a presentation component can present such detected wireless network devices. (*See* page 7 line 3). In addition, an artificial intelligence component determines expected availability for such devices based on user behavior. (*See* page 8 lines 30 to page 9 line 3).

C. Independent Claim 38

The subject invention as recited in independent claim 38 is directed to detecting multi dimensional location of wireless data relative to a portable terminal. (*See* Fig. 3A). Devices such detected can then be presented on the portable terminal based on trends of user behavior. (*See* page 8 lines 30 to page 9 line 3). Moreover, devices can be presented based in their actual or expected availability. (*See* page 9 lines 3-5). For example, behavior of users in employing such devices can be learned by a classifier to further anticipate availability of the one or more other wireless device. (*See* page 8 line 27 to page 9 line 4; *see* also page 9 lines 21-28). Additionally, various inferences can be employed to identify a specific context or action (*e.g.*, availability of a wireless device based on user behavior), or can generate a probability distribution over states, for example). The inference can be probabilistic (*e.g.*, computation of a

probability distribution over states of interest based on a consideration of data and events), to identify user behavior and/or usage trends. (*See* page 9 lines 22 to page 10 line 16).

D. Independent Claim 53

The invention as recited in independent claim 53 relates to means for dynamically detecting a multi-dimensional physical location of one or more wireless devices on a network relative to a portable terminal based on user behavior; and means for determining user behavior in accessing the one or more wireless devices. (*See* page 1 line 30, *see* page 6 line 7; *see* page 8, lines 29-31; *see* page 13 line 31, *see* page 14 lines 22-24). For example, an inference component and/or an intelligence component can be employed to infer or anticipate availability of such devices. (*See* page 9 lines 29 to page 10 line 16). Accordingly, various inferences can be employed to identify a specific context or action (*e.g.*, availability of a wireless device based on user behavior), or can generate a probability distribution over states, for example. Such inference can be probabilistic (*e.g.*, computation of a probability distribution over states of interest based on a consideration of data and events), to identify user behavior and/or usage trends. (*See* page 9 lines 22 to page 10 line 16).

E. Independent Claim 54

The invention as recited in independent claim 54 is directed to detecting device location on a network relative to a detected portable terminal and a presentation component that represents location of a detected device. (*See* page 4 lines 11-13). Moreover, an inference component can determine usage trends of wireless devices by the detected portable terminal. As such, various inferences can be employed to identify a specific context or action (*e.g.*, availability of a wireless device based on user behavior), or can generate a probability distribution over states, for example). (*See* page 8 line 27 to page 9 line 4; *see* also page 9 lines 21-28). The inference can be probabilistic (*e.g.*, computation of a probability distribution over states of interest based on a consideration of data and events), to identify user behavior and/or usage trends. (*See* page 9 lines 22 to page 10 line 16).

F. Independent Claim 63

The invention as recited in independent claim 63 relates to identifying devices by employing a classifier that learns user behavior and anticipates availability for the wireless devices. A detection component can detect location for wireless devices on a network relative to a first device, and a display component renders multi-dimensional representation of respective locations of the devices on a first wireless device (*See* page 4 lines 11-13). Such detection component automatically extends a sensing range to detect one of a predetermined type of devices. (*See* page 6 lines 27 to page 7 line 2.)

G. Independent Claim 64

Independent claim 64 relates to identifying devices on a wireless network and by saving power by starting at a low signal power and automatically raising the signal power upon reaching a desired result. Such supplies an energy conservation feature, so that the sensing signal strength is slowly increased from lower powered signal strength to a higher-powered signal until the device is sensed (*See* page 17, lines 13 to 16). Moreover, a classifier can learn user behavior for anticipating accessibility for the wireless devices. In one particular aspect, such classifier can infer and/or anticipate availability of detected wireless devices, based on usage trends/user behavior. For example, a support vector machine (SVM) classifier can be employed that operates by finding a dynamically changing hypersurface in the space of possible inputs; and/or defining the time at which a given device/port will become available (*See* page 9 lines 29 to page 10 line 16).

H. Independent Claim 65

Independent claim 65 recites employing a portable terminal for dynamically detecting a multi dimensional location of a wireless device relative to the portable terminal. Moreover, by identifying trends in user behavior availability of wireless device can be anticipated. Devices such detected can then be presented on the portable terminal based on trends of user behavior (*See* page 8, lines 30 to page 9 line 3). Moreover, devices can be presented based in their actual or expected availability. (See page 9 lines 3-5). Additionally, various inferences can be employed to identify a specific context or action (*e.g.*, availability of a wireless device based on user behavior), or can generate a probability distribution over states, for example).

I. Independent Claim 66

The invention as recited in independent claim 66 relates to detecting a multi dimensional location of a wireless device relative to the mobile terminal, and inferring availability of the wireless device based on user behavior. (*See* page 1 line 30, *see* page 6 line 7; *see* page 8, lines 29-31; *see* page 13 line 31, *see* page 14 lines 22-24). Behavior of users in employing such devices can be learned by a classifier to further anticipate availability of the one or more other wireless device. (*See* page 8 line 27 to page 9 line 4; *see* also page 9 lines 21-28). Put differently, such classifier can infer and/or anticipate availability of detected wireless devices, based on usage trends/user behavior. For example, a support vector machine (SVM) classifier can be employed that operates by finding a dynamically changing hypersurface in the space of possible inputs; and/or defining the time at which a given device/port will become available (*See* page 9 lines 29 to page 10 line 16).

VI. Grounds of Rejection to be Reviewed (37 C.F.R. §41.37(c)(1)(vi))

A. Whether claims 1, 3-6, 9-16, 18-28, 63, and 65 are properly rejected under 35 U.S.C. §103(a) as being obvious over Gray *et al.* (US 6,674,403) in view of Tang *et al.* (US 7,139,557), and in further view of Smith *et al.* (US 2003/0124977).

B. Whether claims 38-41, 44-47, 49-54, 56-57, 59-60, 64, and 66 are properly rejected under 35 U.S.C. §103(a) as being obvious over Gray *et al.* in view of Tang *et al.*

C. Whether claim 2 is properly rejected under 35 U.S.C. §103(a) as being obvious over Gray *et al.* in view of Tang *et al.* and Smith *et al.* and further in view of Miyake *et al.* (US 2001/0042118).

D. Whether claims 55 and 62 are properly rejected under 35 U.S.C. §103(a) as being obvious over Gray *et al.* in view of Tang *et al.* and further in view of Miyake *et al.*

E. Whether claims 7-8, 29-30, 42-43, 48, 58, and 61 are properly rejected under 35 U.S.C. §103(a) as being obvious over Gray *et al.* in view of Tang *et al.* and Smith *et al.* (US 2003/0124977) and further in view of Hollenberg (US 6,091,956).

F. Whether claims 42-43, 48, 58, and 61 are properly rejected under 35 U.S.C. §103(a) as being obvious over Gray *et al.* in view of Tang *et al.* and further in view of Hollenberg.

G. Whether claims 31-37 are properly rejected under 35 U.S.C. §103(a) as being obvious over Gray *et al.* in view of Miyake *et al.* and further in view of Hollenberg.

VII. Argument (37 C.F.R. §41.37(c)(1)(vii))

A. Rejection of Claims 1, 3-6, 9-16, 18-28, 63, and 65 Under 35 U.S.C. §103(a)

Claims 1, 3-6, 9-16, 18-28, 63, and 65 stand rejected under 35 U.S.C. §103(a) as being obvious over Gray *et al.* (US 6,674,403) in view of Tang *et al.* (US 7,139,557), and in further view of Smith *et al.* (US 2003/0124977). Reversal of this rejection is respectfully requested for at least the following reasons.

> T]he prior art reference (or references when combined) must teach or suggest ***all claim limitations***. *See* MPEP §706.02(j). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *See In re Vaeck,* 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Contrary to assertions made by the Examiner, column 8 lines 52-67 of Gray *et al.* does not teach ***learning user behavior***; nor determines ***trends from prior user action*** to anticipate expected availability of a wireless device, as in applicant's claimed invention. Rather, such section of Gray *et al.* discloses statistical modeling approaches that may be used to build ***the signal strength model*** for a wireless unit. (*See* Gray *et al.* col. 8 "*That is, according to this approach, building the statistical signal strength model includes performing a communications signal strength survey of the defined space [...] can either be used as signal sources to be measured by the mobile communications device.*" Put differently, such section of Gray *et al.* indicates locations wherein the wireless unit supplies a strong signal and locations where such unit supplies a weak signal; and hence related to features of ***the wireless unit*** – and not ***behavior of a user*** thereof, as in applicant's claimed invention.

For example, aspects of applicant's claimed invention employs various inferences to identify a specific context or action (*e.g.*, availability of a wireless device ***based on user behavior***), or can generate a probability distribution over states, for example. The inference can be probabilistic (*e.g.*, computation of a probability distribution over states of interest based on a consideration of data and events), to ***identify user behavior and/or usage trends***. Such aspects of the claimed invention are not taught or suggested by Gray *et al.*, Tang *et al.*, or Smith *et al.* alone or in combination.

Independent claim 1 recites "a classifier that learns ***user behavior*** of the first wireless device ***based on prior usage*** to anticipate availability of the one or more other wireless device"; and independent claim 63 recites "a classifier that learns ***user trends*** when using the first wireless device to anticipate availability of the ***one or more other wireless device***". Likewise, independent claim 65 recites identifying trends in ***usage history*** to anticipate availability of the wireless device." Such aspects of the claimed invention are not taught or suggested by Gray *et al.*, in view of Tang *et al.* and Smith *et al.*, alone or in combination.

In view of the at least above comments it is readily apparent that combination of Gray *et al.* in view of Tang *et al.* and Smith *et al.* does not render obvious independent claim 1 (claims 3-6, 9-16, 18-28 dependent thereon), and independent claims 63, 65. This rejection should be reversed.

B. Rejection of Claims 38-41, 44-47, 49-54, 56-57, 59-60, 64, and 66 Under 35 U.S.C. §103(a)

Claims 38-41, 44-47, 49-54, 56-57, 59-60, 64, and 66 stand rejected under 35 U.S.C. §103(a) as being obvious over Gray *et al.* in view of Tang *et al.* Independent claim 38 recites "determining trends from ***prior user action*** when accessing wireless devices" and independent claim 53 recites "means for determining earlier user usage when accessing the one or more wireless devices". Moreover, independent claim 54 recites "an inference component that determines usage trends of wireless devices by the ***detected portable terminal based on usage history***" and independent claim 63 recites "a classifier that learns ***user trends*** when using the first wireless device to anticipate availability of the one or more other wireless device". In addition, independent claim 64 recites "a classifier that learns from prior user behavior of the

first wireless device to anticipate accessibility of the one or more other wireless devices", and independent claim 65 recites identifying trends in ***usage history*** to anticipate availability of the wireless device." Furthermore, independent claim 66 recites "inferring availability of the wireless device based on prior user behavior." As explained earlier, such aspects of the claimed invention are not taught or suggested invention by Gray *et al.* alone or in combination with Tang *et al.* Reversal of this rejection is respectfully requested.

C. Rejection of Claim 2 Under 35 U.S.C. §103(a)

Claim 2 stands rejected under 35 U.S.C. §103(a) as being obvious over Gray *et al.* in view of Tang *et al.* and Smith *et al.* and further in view of Miyake *et al.* (US 2001/0042118). Claim 2 depends from independent claim 1, and Miyake *et al.* does not make up for the aforementioned deficiencies of Gray *et al.* in view of Tang *et al.* and Smith *et al.* with respect to independent claim 1. Reversal of this rejection is respectfully requested.

D. Rejection of Claims 55 and 62 Under 35 U.S.C. §103(a)

Claims 55 and 62 stand rejected under 35 U.S.C. §103(a) as being obvious over Gray *et al.* in view of Tang *et al.* and further in view of Miyake *et al.* Claims 55, 62 depend from independent claim 54 and Miyake *et al.* fails to make up for the deficiencies of Gray *et al.* in view of Tang *et al.* with respect to independent claim 54. Reversal of this rejection is respectfully requested.

E. Rejection of Claims 7-8, 29-30, 42-43, 48, 58, and 61 Under 35 U.S.C. §103(a)

Reversal of this rejection is respectfully requested for at least the following reasons. The subject claims depend from independent claims 1, 38, 53, 54 respectively, and Hollenberg fails to make up for the deficiencies of Gray *et al.* in view of Tang *et al.* and Smith *et al.* with respect to the subject independent claims. This rejection should be reversed.

F. Rejection of Claims 42-43, 48, 58, and 61 Under 35 U.S.C. §103(a)

Claims 42-43, 48, 58, and 61 stand rejected again under 35 U.S.C. §103(a) as being obvious over Gray *et al.* in view of Tang *et al.* and further in view of Hollenberg. The subject claims depend from independent claims 38, 53, 54 respectively, and Hollenberg fails to make up

for the deficiencies of Gray *et al.* and Tang *et al.* with respect to the subject independent claims. Reversal of this rejection is respectfully requested.

G. Rejection of Claims 31-37 Under 35 U.S.C. §103(a)

Claims 31-37 stand rejected under 35 U.S.C. §103(a) as being obvious over Gray *et al.* in view of Miyake *et al.* and further in view of Hollenberg. The subject claims depend from independent claims 31, and Hollenberg fails to make up for the deficiencies of Gray *et al.* and Miyake *et al.* with respect to independent claim 31. This rejection should be reversed.

CONCLUSION

For at least the above reasons, the claims currently under consideration are believed to be patentable over the cited reference. Accordingly, it is respectfully requested that the rejections of claims 1-16, 18-45 and 47-66 be reversed.

If any additional fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063.

Respectfully submitted,

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VIII. Claims Appendix (37 C.F.R. §41.37(c)(1)(viii))

What is claimed is:

1. A system that facilitates discovery and display of devices, comprising:

a detection component located on a first wireless device that dynamically identifies a multi-dimensional location of one or more other wireless devices of a network relative to the first wireless device;

a display component that renders a multi-dimensional representation of respective locations of the devices on the first wireless device;

the detection component automatically extends a sensing range to detect at least one of a predetermined type of the devices; and

a classifier that learns user behavior of the first wireless device based on prior usage, to anticipate availability of the one or more other wireless device.

2. The system of claim 1, the multi-dimensional location is a three-dimensional location.

3. The system of claim 1, the respective locations of the one or more devices are displayed relative to the first device.

4. The system of claim 1, the respective locations of at least one of the devices and the first device are displayed on the first device relative to a fixed point.

5. The system of claim 1, the respective locations of the devices whether moving or stationary are displayed dynamically relative to the first device while the first device is moving.

6. The system of claim 1, the first device and one or more devices are moving such that the respective locations of the one or more moving devices are presented dynamically *via* the display component.

7. The system of claim 1, further comprising a filter that selects a subset of the devices the locations of which are presented by the display component.

8. The system of claim 1, further comprising a filter that facilitates presenting a subset of the devices in a selected volume of space.

9. The system of claim 1, further comprising a filter that filters out barrier materials interstitial to one or more of the devices and the first device such that the devices may be sensed and displayed.

10. The system of claim 1, further comprising a filter that accesses a lookup table of barrier material properties to facilitate sensing and presenting one or more of the devices that are located beyond the corresponding barrier materials.

11. The system of claim 1, further comprising a filter that selects a subset of the devices according to at least one of frequency bandwidth and wireless technology.

12. The system of claim 1, the detection component utilizes analytical results of radio wave characteristics to dynamically determine a location of walls, floors, and other barriers within a given space.

13. The system of claim 1, the devices include at least one of wireless input devices, wireless peripheral devices, and wireless network access points.

14. The system of claim 13, the input devices include at least one of a mouse and a keyboard.

15. The system of claim 1, the first device communicates in at least one of a 2.4 GHz and 5 GHz radio band.

16. The system of claim 1, the first device communicates according to at least one of an IEEE 802.11 standard, an ultrawideband regime, and a radio frequency identification regime.

17. (Canceled)

18. The system of claim 1, the detection component automatically extends a sensing range to detect a predetermined number of the devices.

19. The system of claim 1, further comprising a communication component that receives a map of device locations, which map is presented by the display component in the two- or three-dimensional representation.

20. The system of claim 1, the display component presents at least one of a graphical representation of the devices and a corresponding textual identifier.

21. A portable terminal device according to the system of claim 1.

22. A computer according to the system of claim 1.

23. The system of claim 1, further comprising a classifier that automatically determines which of the devices is available for use by a user of the first device, and which of the available devices to direct the user.

24. The system of claim 23, the classifier directs the user of the first device to the available devices by presenting the two- or three-dimensional representation to the user.

25. The system of claim 23, the classifier is a support vector machine.

26. The system of claim 23, the available devices include data ports.

27. The system of claim 1, the detection component conserves power by beginning at a low signal strength and automatically increasing the signal strength until the desired result is reached.

28. The system of claim 27, the result includes at least one of detecting a predetermined number of the devices, detecting a predetermined number of device types, and reaching a predetermined signal strength.

29. The system of claim 1, the display component facilitates assigning a graphical representation of a vector to a displayed representation of one of the devices, which vector indicates at least one of distance and direction of the device relative to the first device.

30. The system of claim 1, further comprising an input component that accommodates at least one of voice input, touch screen input, and input device signals.

31. A system that facilitates discovery and presentation of devices, comprising:

a detection component comprised within a new wireless device that dynamically identifies three-dimensional location data of wireless devices of a network relative to the new wireless device;

a filter component that filters the location data according to predetermined location criteria;

a presentation component that presents *via* the new device a two- or three-dimensional graphical representation of respective locations of the devices based on expected availability; and

an artificial intelligence component that determines expected availability based on past usage.

32. The system of claim 31, the respective locations of the devices are displayed relative to the new device, and include a floor identifier associated with the location of an identified device.

33. The system of claim 31, the presentation component includes at least one of audio and video capability.

34. The system of claim 31, the location criteria includes a predetermined volume of space.

35. The system of claim 31, the location criteria includes analyzing and processing barrier materials that interfere with detecting the devices.

36. The system of claim 31, the location criteria includes a fixed detection range based upon a given implementation.

37. The system of claim 31, further comprising a communication component that receives a map of device locations, which map is presented by the presentation component in the two- or three-dimensional representation.

38. A method of discovering and displaying devices, comprising:

employing a portable terminal for dynamically detecting a multi-dimensional location of a wireless device relative to the portable terminal;

presenting a multi-dimensional representation of the locations of the devices on the portable terminal based on actual or expected availability; and

determining trends from prior user action when accessing wireless devices.

39. The method of claim 38, the location of the device is displayed relative to the portable terminal.

40. The method of claim 38, further comprising dynamically displaying the multi-dimensional representation of the location of the device relative to the portable terminal when the portable terminal is moving.

41. The method of claim 38, further comprising dynamically displaying the multi-dimensional representation of the location of the device relative to the portable terminal when both the device and the portable terminal are moving.

42. The method of claim 38, further comprising filtering a plurality of detected remote wireless devices to select the device.

43. The method of claim 38, further comprising filtering a plurality of detected wireless devices to present only those devices in a selected volume of space.

44. The method of claim 38, further comprising filtering out barrier materials interstitial to the devices and the portable terminal such that the devices may be sensed.

45. The method of claim 38, the device is one of a wireless input device, wireless peripheral device, and wireless network access point.

46. (Canceled)

47. The method of claim 38, further comprising automatically extending a sensing range to detect a predetermined number of the devices.

48. The method of claim 47, the multi-dimensional representation includes at least one of a graphic representative of the device, a text identifier associated with the device, and a location vector that corresponds to an approximate direction and distance of the device relative to the portable terminal.

49. The method of claim 38, further comprising proxying the portable terminal through a device location system such that the location of the wireless device is obtained and presented on the portable terminal.

50. The method of claim 38, further comprising generating at least one map in response to detecting the wireless device, the map presented on the portable terminal to show the location of the device.

51. The method of claim 50, the map is generated dynamically in at least one of a background and a foreground.

52. The method of claim 50, the map is presented while another map is being generated in the background.

53. A system that facilitates the discovery and display of devices, comprising:

means for dynamically detecting a multi-dimensional physical location of one or more wireless devices on a network relative to a portable terminal based on user behavior;

means for presenting on the portable terminal a multi-dimensional representation of the physical location of the device relative to the portable terminal; and

means for determining user earlier usage when accessing the one or more wireless devices.

54. A computer implemented system comprising:

an input component for processing management information, the management information is associated with at least one of configuring the computer according to configuration information and detecting the device locations on a network relative to a detected portable terminal;

a presentation component for presenting a 2-D or 3-D representation of the locations of one or more of the detected devices based upon the management information; and

an inference component that determines usage trends of wireless devices by the detected portable terminal based on usage history.

55. The computer implemented system of claim 54, the configuration information includes at least one of an implementation, device type, environment, sensing range mode, and filter criteria.

56. The computer implemented system of claim 54, the filter criteria comprises at least one of wireless technology and frequency bandwidth.

57. The computer implemented system of claim 54, further comprising a mapping feature that maps a representative location in space of the detected terminal relative to other detected devices.

58. The computer implemented system of claim 54, the presentation component provides a graphical representation of a location vector that indicates a direction and distance of the computer from the detected terminal.

59. The computer implemented system of claim 54, further comprising a mapping feature that automatically maps device location information according to predetermined spatial criteria.

60. The computer implemented system of claim 54, further comprising a graphical floor layout of individual device location graphics, wherein the floor layout and location graphics are selectable.

61. The computer implemented system of claim 54, the presentation component further comprises at least one of means for selecting a floor in the building and means for selecting one of the device locations.

62. The computer implemented system of claim 54, further comprising a graphical means to display a color and/or a pattern corresponding to user preference information.

63. A system that facilitates discovery and display of devices, comprising:

a recognition component located on a first wireless device that dynamically identifies a multi-dimensional location of one or more other wireless devices of a network relative to the first wireless device;

a display component that renders a multi-dimensional representation of respective locations of the devices on the first wireless device;

the recognition component automatically expanding a sensing range to detect a predetermined quantity of the devices; and

a classifier that learns user trends when using the first wireless device to anticipate availability of the one or more other wireless device.

64. A system that facilitates discovery and display of devices, comprising:

a finding component located on a first wireless device that dynamically identifies a multi-dimensional location of one or more other wireless devices of a network relative to the first wireless device;

a display component that renders a multi-dimensional representation of respective locations of the devices on the first wireless device;

the finding component saves power by starting at a low signal power and automatically raising the signal power upon reaching the desired result, and

a classifier that learns from prior user behavior of the first wireless device to anticipate accessibility of the one or more other wireless devices.

65. A method of discovering and displaying devices, comprising:

employing a portable terminal for dynamically detecting a multi-dimensional location of a wireless device relative to the portable terminal;

presenting a multi-dimensional representation of the locations of the devices on the portable terminal;

automatically extending a detecting range to detect a predetermined number of the devices; and.

identifying trends in usage history to anticipate availability of the wireless device.

66. A method of discovering and displaying devices, comprising:

employing a mobile terminal for dynamically detecting a multi-dimensional location of a wireless device relative to the mobile terminal;

presenting a multi-dimensional representation of the locations of the devices on the mobile terminal; dynamically displaying the multi-dimensional representation of the location of the device relative to the mobile terminal when both the device and the mobile terminal are moving, and

inferring availability of the wireless device based on prior user behavior.

IX. Evidence Appendix (37 C.F.R. §41.37(c)(1)(ix))

None.

X. Related Proceedings Appendix (37 C.F.R. §41.37(c)(1)(x))

None.